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EXAMINER
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HAYES, JOHN W

ART UNIT	PAPER NUMBER
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3621

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Please find below and/or attached an Office communication concerning this application or proceeding.



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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Paper No. 41

Application Number: 09/049,297  
Filing Date: March 27, 1998  
Appellant(s): WALKER ET AL.

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Mr. Michael Downs  
For Appellant

**EXAMINER'S ANSWER**

**MAILED**

JAN 20 2004

**GROUP 3600**

This is in response to the appeal brief filed 27 October 2003.

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**(1) Real Party in Interest**

A statement identifying the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) Status of Claims**

The statement of the status of the claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Invention**

The summary of invention contained in the brief is correct.

**(6) Issues**

The appellant's statement of the issues in the brief is correct.

**(7) Grouping of Claims**

Appellant's brief includes a statement that claims 98 and 108 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

**(8) Claims Appealed**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(9) Prior Art of Record**

No prior art is relied upon by the examiner in the rejection of the claims under appeal.

**(10) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 98 and 108 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

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The basis of this rejection is set forth in a two-prong test of:

- (1) whether the invention is within the technological arts; and
- (2) whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena) that do not apply, involve, use, or advance the technological arts fail to promote the "progress of science and the useful arts" (i.e., the physical sciences as opposed to social sciences, for example) and therefore are found to be non-statutory subject matter. For a process claim to pass muster, the recited process must somehow apply, involve, use, or advance the technological arts. In the present case, claims 98 and 108 only recite an abstract idea. The recited steps of merely receiving information about a customer and the customer's transaction information and determining a discount based on this information does not apply, involve, use, or advance the technological arts since all of the recited steps can be performed in the mind of the user or by use of a pencil and paper. These steps only constitute an idea of how to determine a discount for a customer.

As to technological arts recited in the preamble, mere recitation in the preamble (i.e., intended or field of use) or mere implication of employing a machine or article of manufacture to perform some or all of the recited steps does not confer statutory subject matter to an otherwise abstract idea unless there is positive recitation in the claim as a whole to breathe life and meaning into the preamble. In the present case, with regard to claims 98 and 108, none of the recited steps are directed to anything in the technological arts as explained above either in the preamble or the body of the claims. Looking at the claims as a whole, nothing in the body of the claim recites any structure or functionality to suggest that a computer performs the recited steps. Furthermore, even if the preamble included a recitation with regard to a machine, article of manufacture or any other structure or functionality to suggest that a computer performs the recited steps, this would be taken to merely recite a field of use.

Mere intended or nominal use of a component, albeit within the technological arts, does not confer statutory subject matter to an otherwise abstract idea if the component does not apply, involve, use, or advance the underlying process.

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Additionally, for a claimed invention to be statutory, the claimed invention must produce a useful, concrete, and tangible result. In the present case, the claimed invention produces discounts (i.e., repeatable) based upon certain customer information and provides the discounts to the customer (i.e., useful and tangible).

Although the recited process produces a useful, concrete, and tangible result, since the claimed invention, as a whole, is not within the technological arts as explained above, claims 98 and 108 are deemed to be directed to non-statutory subject matter

Claims 98-108 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 59-61 of copending Application No. 09/166,267. Although the conflicting claims are not identical, they are not patentably distinct from each other for the reasons stated below.

As per claims 98-108 of the present application, Claims 59-61 of Application No. 09/166,267 recite all the limitations of these claims. However, claims 59-61 of Application No. 09/166,267 differ since they further recite an additional claim limitation including determining a customer rating of the customer and determining the second discount based on the customer rating. However, it would have been obvious to a person of ordinary skill in the art to modify claims 59-61 of Application No. 09/166,267 by removing this limitation. It is well settled that the omission of an element and its function is an obvious expedient if the remaining elements perform the same function as before. *In re Karlson*, 136 USPQ 184 (CCPA 1963). Also note *Ex parte Rainu*, 168 USPQ 375 (Bd. App. 1969). Omission of a reference element whose function is not needed would be obvious to one of ordinary skill in the art.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

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**(11) Response to Argument**

Appellant argues in paragraph 1.3 that the examiner has made no prima facie showing that the claim of Group I is non-statutory and has not provided a proper legal basis for rejecting the claim as non-statutory. Appellant argues that the two-prong test used by the examiner has no basis in law. Appellant further argues that the proper legal test for the presence of statutory subject matter is only that a claimed process or apparatus produce a "useful, concrete and tangible result" and relies on the decisions of *AT&T Corp. v. Excel Communications, Inc.* and *State Street Bank & Trust Co. v. Signature Fin. Group, Inc.*

In reply, as an initial matter, the United States Constitution under Art. I, §8, cl. 8 gave Congress the power to "[p]romote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries". In carrying out this power, Congress authorized under 35 U.S.C. §101 a grant of a patent to "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition or matter, or any new and useful improvement thereof." Therefore, a fundamental premise is that a patent is a statutorily created vehicle for Congress to confer an exclusive right to the inventors for "inventions" that promote the progress of "science and the useful arts". The phrase "technological arts" has been created and used by the courts to offer another view of the term "useful arts". See *In re Musgrave*, 167 USPQ (BNA) 280 (CCPA 1970). See also MPEP 2106 II A which states that only when the claim is devoid of any limitation to a practical application "in the technological arts" should it be rejected under 35 U.S.C. 101. Hence, the first test of whether an invention is eligible for a patent is to determine if the invention is within the "technological arts".

Further, despite the express language of §101, several judicially created exceptions have been established to exclude certain subject matter as being patentable subject matter covered by §101. These exceptions include "laws of nature", "natural phenomena", and "abstract ideas". See *Diamond v. Diehr*, 450, U.S. 175, 185, 209 USPQ (BNA) 1, 7 (1981). However, courts have found that even if an invention incorporates abstract ideas, such as mathematical algorithms, the invention may nevertheless be statutory subject matter if the invention as a whole produces a "useful, concrete and tangible result." See

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*State Street Bank & Trust Co. v. Signature Financial Group, Inc.* 149 F.3d 1368, 1973, 47 USPQ2d (BNA) 1596 (Fed. Cir. 1998).

The "two prong" test was evident when the Court of Customs and Patent Appeals (CCPA) decided an appeal from the Board of Patent Appeals and Interferences (BPAI). See *In re Toma*, 197 USPQ (BNA) 852 (CCPA 1978). In *Toma*, the court held that the recited mathematical algorithm did not render the claim as a whole non-statutory using the Freeman-Walter-Abele test as applied to *Gottschalk v. Benson*, 409 U.S. 63, 175 USPQ (BNA) 673 (1972). Additionally, the court decided separately on the issue of the "technological arts". The court developed a "technological arts" analysis:

The "technological" or "useful" arts inquiry must focus on whether the claimed subject matter...is statutory, not on whether the product of the claimed subject matter...is statutory, not on whether the prior art which the claimed subject matter purports to replace...is statutory, and not on whether the claimed subject matter is presently perceived to be an improvement over the prior art, e.g., whether it "enhances" the operation of a machine. *In re Toma* at 857.

In *Toma*, the claimed invention was a computer program for translating a source human language (e.g., Russian) into a target human language (e.g., English). The court found that the claimed computer implemented process was within the "technological art" because the claimed invention was an operation being performed by a computer within a computer.

The decision in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* never addressed this prong of the test. In *State Street Bank & Trust Co.*, the court found that the "mathematical exception" using the Freeman-Walter-Abele test has little, if any, application to determining the presence of statutory subject matter but rather, statutory subject matter should be based on whether the operation produces a "useful, concrete and tangible result". See *State Street Bank & Trust Co.* at 1374. Furthermore, the court found that there was no "business method exception" since the court decisions that purported to create such exceptions were based on novelty or lack of enablement issues and not on statutory grounds. Therefore, the court held that "[w]hether the patent's claims are too broad to be patentable is not to be judged under §101, but rather under §§102, 103 and 112." See *State Street Bank & Trust Co.* at 1377. Both of these analysis goes towards whether the claimed invention is non-statutory because of the presence of an abstract idea. Indeed, *State Street* abolished the Freeman-Walter-Abele test used in

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*Toma*. However, *State Street* never addressed the second part of the analysis, i.e., the "technological arts" test established in *Toma* because the invention in *State Street* (i.e., a computerized system for determining the year-end income, expense, and capital gain or loss for the portfolio) was already determined to be within the technological arts under the *Toma* test.

In the decision of *AT&T Corp. v. Excel Communications Inc.*, 50 USPQ2d 1447, 1449-50 (Fed. Cir. 1999), it was recognized that not everything is statutory subject matter. The court noted that a mathematical algorithm or abstract idea is directed to non-statutory subject matter unless applied in a useful way or otherwise reduced to some type of practical application. The analysis in the *AT&T Corp* decision focused on whether or not the claimed mathematical algorithm was used to produce a useful, concrete and tangible result. AT&T's claimed process employs subscribers' and call recipients' primary interexchange carrier (PIC) indicator as data, applies Boolean algebra to those data to determine the value of the PIC indicator, and applies that value through switching and recording mechanisms to create a signal useful for billing purposes. The court noted that PIC indicator represents information about the call recipient's PIC, a useful, non-abstract result that facilitates differential billing of long-distance calls made by an IXC's subscriber, and therefore, found the claimed process to comfortably fall within the scope of Section 101. *AT&T Corp.*, 50 USPQ2d 1453. Again, *AT&T Corp.* never addressed the second part of the analysis, i.e., the "technological arts" test established in *Toma* because the court in *AT&T Corp.* recognized that the claims require the use of switches and computers. In *AT&T Corp.*, the decisions of *In re Alappat*, 33 F.3d 1526, 31 USPQ2d 1545 (Fed. Cir. 1994) and *Arrhythmia Research Tech. Inc. v. Corazonix Corp.*, 958 F.2d 1053, 1060, 22 USPQ2d 1033, 1039 (Fed. Cir. 1992) were also cited. In *Alappat* it was held that more than an abstract idea was claimed because the claimed invention as a whole was directed toward forming a specific machine that produced the useful, concrete and tangible result of a smooth waveform display. In *Alappat*, the claimed invention was for a machine that achieved certain results and was therefore, already considered to involve the technological arts. In *Arrhythmia*, the court reasoned that the method claims qualified as statutory subject matter by noting that the steps transformed physical, electrical signals from one form into another form – a number representing a signal related to the patient's heart activity, a non-abstract output.

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This dichotomy has been recently acknowledged by the Board of Patent Appeals and Interferences (BPAI) in affirming a §101 rejection finding the claimed invention to be non-statutory. See *Ex parte Bowman*, 61 USPQ2d (BNA) 1669 (BdPatApp&Int 2001).

The claims of the present application are distinguished from the claims analyzed in the decisions of *State Street*, *Alappat*, *Arrhythmia* and *AT&T*, where the claims in these cases clearly involved the use of technology as shown below.

**State Street:** The claims were in means plus function form and directed to a data processing system for managing a financial services configuration of a portfolio established as a partnership; the claims included limitations of a computer processor means for processing data, a storage means for storing data on a storage medium along with first through fifth means for processing different types of financial data. As such, the claims analyzed in *State Street* clearly involved the technological arts and, therefore, whether or not the claimed invention involved the technological arts was not an issue.

**AT&T Corp:** The claims were directed to a method for use in a telecommunications system in which interexchange calls initiated by each subscriber are automatically routed over the facilities of a particular one of a plurality of interexchange carriers associated with that subscriber comprising generating a message record for an interexchange call between an originating subscriber and a terminating subscriber, and including, in said message record, a primary interexchange carrier (PIC) indicator having a value which is a function of whether or not the interexchange carrier associated with said terminating subscriber is a predetermined one of said interexchange carriers. In considering these claims, it is clear that technology is being used to “automatically route” calls over the facilities of interexchange carriers and generating a message record for the call. Furthermore, the courts, in analyzing these claims, clearly indicated that they recognized the claims require the use of switches and computers. See *AT&T Corp. v. Excel Communications Inc.*, 50 USPQ2d at 1450 (Fed. Cir. 1999). The court further noted that AT&T’s claimed process employs subscriber’s and call recipients’ PICs as data, applies Boolean algebra to those data to determine the value of the PIC indicator, and applies that value through *switching and recording mechanisms* to create a signal useful for billing purposes. See *AT&T Corp. v. Excel Communications Inc.*, 50 USPQ2d at 1453 (Fed. Cir. 1999). As such, the claims analyzed

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in AT&T clearly involved the technological arts as recognized by the court and, therefore, whether or not the claimed invention involved the technological arts was not an issue.

**Alappat:** The claims were directed to a rasterizer for converting vector list data representing sample magnitudes of an input waveform into anti-aliased pixel illumination intensity data to be displayed on a display means comprising various means for determining distances and means for outputting illumination intensity data. Alappat's invention related generally to a means for creating a smooth waveform display in a digital oscilloscope and as indicated by the court, Alappat's invention is an improvement in an oscilloscope comparable to a TV having a clearer picture. The court reasoned that invention was statutory because the claimed invention was directed to a "machine". See *In re Alappat*, 31 USPQ2d at 1552-54 (Fed. Cir. 1994). Furthermore, in the decision of *AT&T Corp.*, the courts recognized that the claims in Alappat were for a machine that achieved certain results. See *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* 50 USPQ2d at 1452 (CAFC 1999). Once again, these claims clearly involve the technological arts as recognized by the court and, therefore, whether or not the claimed invention involved the technological arts was not an issue.

**Arrhythmia:** The claims were directed to a method for analyzing electrocardiograph signals to determine the presence or absence of a predetermined level of high frequency energy in the late QRS signal including the step of converting a series of QRS signals to time segments, each segment having a digital value equivalent to the analog value of said signals at said time. In considering these claims, it is clear that technology is being used to convert a series of QRS signals to time segments having a digital value. Once again, these claims clearly involve the technological arts since one could not convert a signal to a time segment having a digital value without the aid of a computer or some processing device and, therefore, whether or not the claimed invention involved the technological arts was not an issue.

Contrary to the claims in the above cited cases, in the present application, the claims are completely silent with regard to technology and is purely an abstract idea or process steps that are employed completely without the use of any technology whatsoever. The claims are no more than a suggested idea that the purchase price in a sales transaction be discounted based on prior history with the customer. The claims are completely devoid of any means to carry out a process implementing the

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idea of exchanging an item based on a discount and there is neither an efficiency in the computation of a price by using technology, nor is there any change in the characteristics of the item sold.

Appellant asserts that the limitation of *providing the second discount to a customer* (claim 98) and *exchanging at least one item for a payment amount that is based on the second discount* (claim 108) may produce various, useful, concrete and tangible results such as associating the second discount with the customer or applying the second discount to a transaction of the customer. Examiner also notes that these suggested useful, concrete and tangible results offered by the appellant are not recited or even suggested in the claims being appealed. The above cited limitation may be viewed, for example, as nothing more than simply mailing a coupon to the customer and may not actually ever be applied in a transaction with the customer. Appellant further states that the scope of claims 98 and 108, as present, encompass a variety of specific implementations of the claimed process and certain of these embodiments implicate the use of devices (such as computers or data processing devices) in the processes. Examiner strongly disagrees with this notion and submits that there are absolutely no limitations included in this claim that would suggest a computer or data processing device is being used to carry out the processes.

Furthermore, in accordance with MPEP 2106 (IV)(B)(2)(b) "Statutory Process Claims", not all processes are statutory under 35 U.S.C. 101. *Schrader*, 22 F.3d at 296, 30 USPQ2d at 1460. To be statutory, a claimed computer related process must either: (A) result in a physical transformation outside the computer for which a practical application in the technological arts is either disclosed in the specification or would have been known to a skilled artisan, or (B) be limited to a practical application within the technological arts. See *Diamond v. Diehr*, 450 U.S. at 183-184, 209 USPQ at 6 (quoting *Cochrane v. Deener*, 94 U.S. 780, 787-788 (1877)). The claims in the present application do not appear to satisfy either of the two conditions listed above. First, the claims do not include limitations that would suggest a computer is being used to transform the data from one form to another that would place the invention in the technological arts. Second, disregarding the fact that there is no computer claimed that would physically transform the data, there does not appear to be any physical transformation of data (i.e. discount amounts). The claims merely determine unrelated first and second discounts based on several

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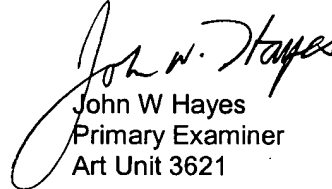
parameters, however, the second discount appears to be an arbitrary abstract thing and not a discrete value resulting from a calculation of these parameters by a computer or processor. The parameters used to determine the second discount in the claim are based upon the passage of time and, therefore, there is no direct correlation between these time parameters and a value of the second discount. In other words, the claims suggest that if the customer meets the time conditions, then he/she is eligible for the second discount, however, the value of the second discount appears to be arbitrarily set by some other means (possibly a human) and not a result of an algorithm performed by a computer or processor specifically using these parameters. Thus, there neither appears to be any physical transformation of data from one form to another which is based upon an algorithm or a calculation by a computer or processor, nor is there any technology claimed that would be used to transform the data.

On an unrelated note, examiner would like to point out that the Final Rejection included a provisional double patenting rejection over related U.S. Patent Application No. 09/166,267. Appellant has acknowledged this rejection in the brief, however, has offered no attempt to traverse the rejection. Thus, examiner submits that this is evidence that appellant admits the double patenting rejection is proper.

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In light of all the above reasons, it is believed that the rejections should be sustained.


Respectfully submitted,

  
John W Hayes  
Primary Examiner  
Art Unit 3621

January 8, 2004

Conferees

  
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